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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,437	08/07/2006	Naoki Yamaguchi	060597	8396
23850	7590	01/22/2008		
KRATZ, QUINTOS & HANSON, LLP			EXAMINER	
1420 K Street, N.W.			CERNOCH, STEVEN MICHAEL	
Suite 400				
WASHINGTON, DC 20005			ART UNIT	PAPER NUMBER
			4114	
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			01/22/2008 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/588,437

**Applicant(s)**

YAMAGUCHI ET AL.

**Examiner**

STEVEN M. CERNOCH

**Art Unit**

4114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7, 8 and 17 is/are rejected.
- 7) ☒ Claim(s) 3, 6 and 9-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date 6/26/2007, 8/7/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(c), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 4, 5, 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumiyoshi et al. (World Pat No. WO 03/072263 A1) in view of Zawacki et al. (US Pat No 4,069,974).

Regarding claim 1, Sumiyoshi et al. teaches an electrostatic device configured and disposed to electrostatically charge and dispense a liquid composition from a supply to a point of dispense, wherein the device comprises (abstract, lines 1-6): an actuator (page 13, line 2); a high voltage generator to provide a high voltage (page 3, line 16); a power source to activate said actuator and said high voltage generator (page 3, line 15); a reservoir to contain the supply of said liquid composition (page 3, line 9); and a dispensing unit comprising: a pump in immediate upstream relation with the reservoir for supplying the liquid composition from the reservoir, said pump being mechanically connected to said actuator to be driven thereby (page 13, lines 6-9); an emitter electrode to electrostatically charge the liquid composition, the emitter electrode being electrically connected to said high voltage generator (page 3, lines 18-21); and a nozzle to dispense the liquid composition, said nozzle being disposed at the point of dispense (page 3, lines 10-11) and wherein the reservoir is configured to provide a removable cartridge (page 4, lines 7-10), said reservoir being devoid of the field electrode (page 3, line 9), however Sumiyoshi et al. does not teach wherein the device further comprises a field electrode surrounding the reservoir, said field electrode being connected to said high voltage generator for providing the entire liquid composition with more or less a common electric potential, but Zawacki et al. does disclose wherein the device further comprises a field electrode surrounding the reservoir, said field electrode being connected to said high voltage generator for providing the entire liquid composition with more or less a common electric potential (abstract, lines 16-19). Therefore it

would be obvious to one having ordinary skill in the art to have the motivation to modify the electrostatic spray device of Sumiyoshi et al. with the field electrode of Zawacki et al. for electrostatic field purposes.

With regard to claim 2, Sumiyoshi et al. teaches wherein said device includes a housing (page 5, lines 3-4), said housing being formed with a concavity for detachably receiving said reservoir (Fig. 2B) with said field electrode being incorporated in said housing around said concavity.

In regards to claim 4, Sumiyoshi et al. discloses wherein said reservoir is coupled to said dispensing unit (page 3, line 9) and is cooperative therewith to define said cartridge (page 4, lines 7-10), said housing comprising a positioning means with which said cartridge detachably engages for resting said reservoir in said concavity (Figs. 1 and 2B), wherein when said cartridge is engaged with said housing, the actuator is detachably engaged with a mechanism to activate said pump (page 13, lines 10-11), and a voltage terminal is detachably in contact with said emitter electrode to apply said high voltage to said emitter electrode (page 3, lines 18-21).

Regarding claim 5, Sumiyoshi et al. discloses wherein said positioning means is a mount formed at the upper end of said housing on which said dispensing unit rests (Figs. 1 and 2B).

With regard to claim 8, Sumiyoshi et al. teaches wherein said pump is a suction pump having a drive element which is driven by said actuator to suck up said liquid composition from said reservoir and forces it out of the nozzle (page 13, lines 6-9).

In regards to claim 17, Sumiyoshi et al. does not teach a field electrode, however Zawacki et al. does teach a field electrode (abstract, lines 16-19).

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sumiyoshi et al. (World Pat No WO 03/072263 A1) in view of Zawacki et al. (US Pat No 4,069,974) and further in view of Hastings et al. (US Pat No 3,747,850).

Regarding claim 7, neither Sumiyoshi et al. nor Zawacki et al. disclose wherein said reservoir is deformable and made of a dielectric material, however Hastings et al. does teach wherein said reservoir is deformable and made of a dielectric material (column 3, lines 28-29). Therefore it would be obvious to one having ordinary skill in the art to have the motivation to modify the electrostatic spray device of Sumiyoshi et al. with the dielectric material of Hastings et al. in order to prevent a slow but steady current drain through the reservoir and consequent deterioration of the resistor.

***Allowable Subject Matter***

5. Claims 3, 6 and 9-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: For claim 3, all of the frame, compartment and housing features are not taught in any of my prior art of record including Sumiyoshi et al., Zawacki et al., and Hastings et al. For claim 6, the voltage terminal in the mount isn't taught by any of my prior art of record either, including Sumiyoshi et al., Zawacki et al., and Hastings et al. For claim 9, all of the frame and compartment features are not taught by any of my prior art on record including Sumiyoshi et al.,

Zawacki et al., and Hastings et al. Lastly, for claim 16, the field electrode extending outwardly from said concavity is not taught by any of my prior art on record including Sumiyoshi et al., Zawacki et al., and Hastings et al.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Noakes et al. (US Pat No 6,079,634) teaches an electrostatic sprayer. Buschor et al. (US Pat No 3,608,823) discloses an apparatus for the electrostatic coating of objects with atomized solid particles. Moy et al. (US Pat No 6,328,233 B1) teaches a sprayer and system for controlled spraying.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN M. CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on M-T, 730-5, F1 -Off, F2 730-5 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Cheng can be reached on (571) 272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SMC  
1/4/2008

/Joe H Cheng/  
Supervisory Patent Examiner  
Art Unit 4114